

# Spatial Plan of the Republic of Serbia in the light of Digital Agenda for Europe 2020

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## 1 ABSTRACT

European Union (EU) needs to overcome and counteract negative effects of the global economic crisis. In this respect, EU has decided to strategically build its social, economic and other development potentials, and to make them able to respond efficiently and effectively on dynamic life and work challenges within Information Society paradigm. Therefore, European Commission (EC) has adopted and, since March 2010, has implemented the Europe 2020 strategy. Its aim is to establish preconditions for common vision of sustainable future in Europe by 7 flagship initiatives, directed to smart, sustainable and inclusive growth throughout EU Member states as well as Candidate states and other bordering regions.

Therefore, in order to assure further increase in standards of life in Europe while facing sharp demographic ageing and increasing global competition, one of those Europe 2020's 7 initiatives –namely, Digital Agenda 2020- has been launched for 'smart growth' implementation. This Agenda consists of common digital priorities and set of targets needed for full utilization of ICT enabling role in every Member states and other relevant territories relying on knowledge and innovation of its citizens. It is expected that wider and better deployment of ICT capabilities, particularly broadband Internet within social and economic domains, would improve daily life quality for both businesses and citizens in Europe, including better health care, more efficient transport solutions, easier access to public services and cultural contents, cleaner environment, etc.

In the same time, spatial planning and plans, especially those on national level, present platform for long-term and strategic thinking, planning, directing, coordinating, implementing and managing development policies and decisions from different domains within certain territories. Because of these characteristics, national spatial plan should be one of crucial policy instruments in any country for Digital Agenda 2020 priorities and 'smart growth' features implementation. On one side, being development blueprint of each country, national spatial plans have role to provide territorial dimension for integrated, balanced and coordinated implementation of different sectoral policies and interests; on the other side, national spatial plans have obligation to promote various and progressive territorial cohesive development principles for inclusive economic and society development in future.

Based on the above recognised national spatial plans strategic role in each country development process, the aim of the article is to identify potentials and capacities of national spatial plan in Serbia for implementing Digital Agenda 2020. To this end, national spatial plan, namely Spatial Plan of the Republic of Serbia 2010-2020 (Plan), is reviewed and analysed in order for relevant Digital Agenda 2020 digital priorities and targets to be recognised and evaluate, and proposal for 'smart development' features and policies integration to be made. Also, since mentioned Spatial plan is adopted in 2010, and Serbia is lagging in ICT advantages utilization in general, expected lacks in support to digital technologies objectives and solutions implementation within this document should provide relevant information and argument for its revision in future.

## 2 INTRODUCTION

Digital Agenda 2020 (URL 2) claims that today development of high-speed networks for Internet access have the same revolutionary impact on the socio-economic progress and prosperity as the development of electricity and transportation networks had a century ago. This is due to the high influence ICT technologies have on the way we live and work today. Furthermore, this observation is specially going to be truth in near future when all digital contents and applications we use today in everyday life and work are expected to be delivered online. For EU year 2020 is estimated to be beginning of smart growth for all by establishment of Digital Single Market based on innovation and knowledge, delivering sustainable economic and social benefits.

In fact, after the economic shock and induced negative effects of global financial crisis from 2008 and onwards, EC has developed and implemented Europe Strategy 2020 (URL 1) with the aim to stimulate and establish smart, sustainable and inclusive economy throughout Member states as well as Candidate states and

bordering regions. In this document, it is envisaged that in 2020 EU economy would have high-level of employment, continually increasing productivity and strong social cohesion, despite rapid ageing as well as fierce economic competition in global scale. In other words, this means that EU has aim till 2020 to establish competitive –namely, digital- economy that would be able to serve needs of inclusive digital society (URL 4, URL 1) and support sustainability relying on resource efficiency and greener growth (URL 1).

These goals of digital economy and digital society for cohesive development throughout EU and in bordering regions would be specially instrumented by the Cohesion Policy (URL 7) and targeted by its priorities decided for European Regional Development Fund and related development (i.e. financial) instruments in period 2014-2020.

In domain of spatial development planning and spatial plans, Territorial Agenda 2020 of EU (URL 3) provide content and provisions requirement and recommendations for future. This Agenda claims that Europe 2020 strategic goals needs also to include territorial dimension, as critical factor, due to big difference among European regions’ development opportunities and capacities for reaching smart, sustainable and inclusive growth targets.

This means that goal of smart growth for all in future through sustainable digital economy advantages creation, where the fast and ultra-fast Internet access plays critical role, needs particularly territorial dimension to have elaborated. In other words, digital economy concept needs strategic coverage by broadband networks within every European territory, e.g. country like Serbia, in future as main precondition for virtuous cycle of the digital economy for digital society well-being to be spun (URL 2).

The aim of this article is, thus, to explore concept and action areas of the Digital Agenda 2020 and to review them in comparative and evaluating manner against the Spatial plan of the Republic of Serbia in order for argued revision recommendations for better and inclusive Internet access to be proposed in future (approaching midterm evaluation of this Plan).

### 3 DIGITAL AGENDA 2020

As already stated above, Digital Agenda 2020 is one of the 7 flagship initiatives of the Europe 2020 strategy aimed at operationalising smart economy concept by universal internet access for all, and thus reaching sustainable economic and social benefits within the future EU single digital market. In other words, this Agenda’s actions are targeted at full utilization of ICT technologies enabling role till year 2020, by providing fast and ultra-fast internet access and interoperable applications to every business and citizen regardless of their location within domains of health care, education, transport, cultural content, public services, etc.

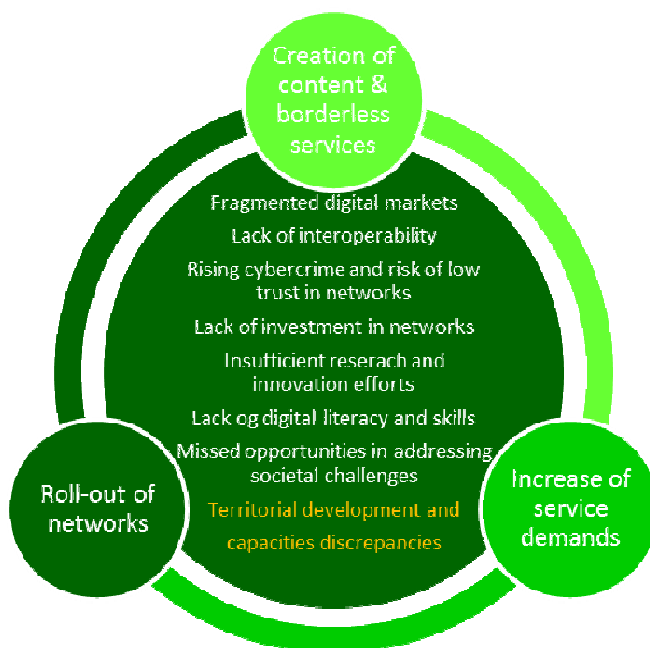


Figure 1: Digital Agenda 2020 virtuous cycle of the digital economy with 7 obstacles extended with Territorial Agenda 2020 territorial development and capacities discrepancies between European regions (URL 2, URL 3)

The prescribed approach for comprehensive and cohesive ICT technologies deployment, so called virtuous cycle of digital economy spinning (URL 2), assumes firstly creation of attractive, interoperable and borderless digital contents, applications and services which would in return increase end-users demand, and thus provide justification for new and/or higher investments in internet access, i.e. broadband networks roll-out. At the moment, Digital Agenda 2020 has identified 7 main obstacles for mentioned digital economy cycle to spin, and thus main aim of sustainable benefits for digital inclusive growth for economy and society to be achieved (Figure 1). If we add here territorial dimension from Territorial Agenda 2020 as obstacle, due to different socio-economic development levels and opportunities between European regions, it's clear that principle of solidarity and/or public subsidies would be necessary for smart development for all to become reality.

Additionally, Digital Agenda calls for actions and responsibilities to be taken both on EU and national level, where the role of national/public policy creators and strategic decision-makers would play special role in providing conditions for achieving digital economy and inclusiveness goals.

In this respect, analysis performed in this article would try to estimate how government could support Digital Agenda aim achievement in long-term and by comprehensive national spatial development planning concept and management in relevant areas, like: opening of public data and registers, providing e-services and e-content, planning broadband network development, etc. being promoted by different sectoral policies.

#### 4 SPATIAL PLAN OF REPUBLIC SERBIA

Spatial Plan of the Republic of Serbia (Plan) presents umbrella strategic document for spatial development in Serbia in period 2010-2020. This comprehensive document includes development vision, principles and goals, as well as development scenarios and concepts, which should provide all policy creators and decision-makers in Serbia with platform for planned, manageable and integrated development of dynamic, growing and diversifying social, economic and environmental processes and phenomena towards sustainable future. Besides listed elements, rest of the Plan document consists of more detailed elaboration of main sectoral plans information as well as sectoral policies and development principles.

Comparing to the previous national and other spatial plans, this Plan includes set of measures and instruments as well as direct responsibilities of development stakeholders in Serbia for the Plan implementation, by its translation and elaboration within lower level plans (spatial and urban ones) and other development documents. Also, this Plan includes monitoring and evaluation model using set of spatial development indicators, where each indicator is related to particular operational and main goals of the Plan. Finally, Plan offers list of key development priorities, i.e. strategic projects, categorised by sectors, responsible parties for implementation (on national, regional or municipality level), as well as by five general development goals of spatial development in Serbia till 2020.

Among the other sectors, Plan in its chapter dedicated to sustainable development in domain of infrastructures elaborates long-term development goals and policy principles relevant for electronic communications in Serbia. (Figure 2) Within text volume of modest length, it's concluded that development of this communication infrastructure is distracted and slowed down by the bombing during 1999. Also, chapter includes summarized description of present status and list of reached and unrealized strategic goals between 2 national plans (that from 1996 and this one, 2010) in domain of public electronic communication networks. As the main goal within this domain till 2020, it is emphasized that development would be directed towards further building and efficient organization of modern electro-communication network, as well as towards making conditions for universal service availability by universal broadband access in each household in Serbia. As support to identified list of operational objectives for development of electronic communications in Serbia in future, concrete development concepts, strategic priorities, measures and instruments are provided as well.

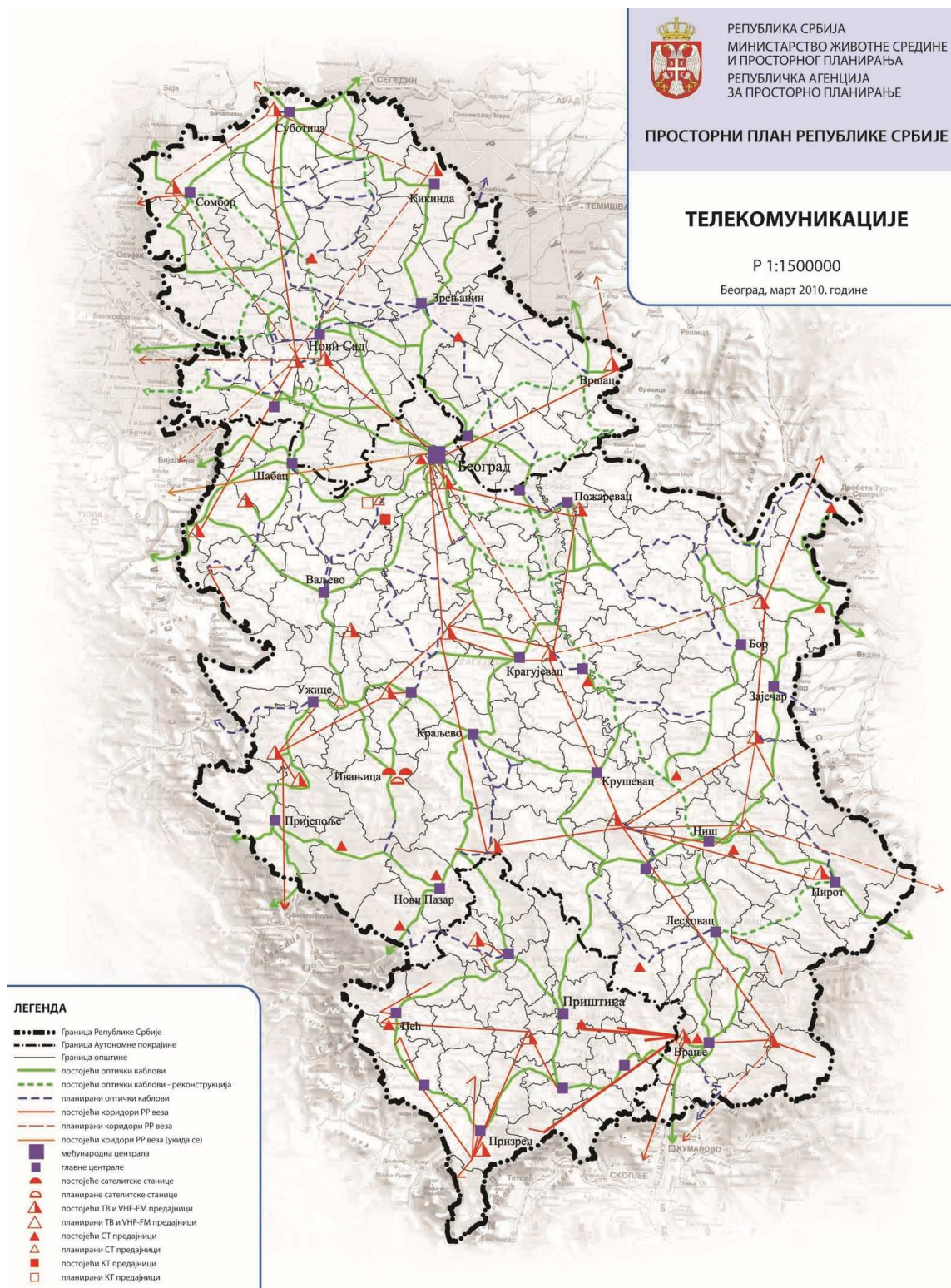


Figure 2: Spatial Plan of the Republic of Serbia - Development of optical cables network and other communications in Serbia till 2020 (existing optical cables presented in green and planned in dark lilac colour) (URL 5)

However, despite highlighted importance of horizontal and vertical coordination of sectoral plans and policies at the beginning of Plan, multidisciplinary in proposed sectoral development scenarios is generally missing. In other words, in sectoral policies and plans presented in Plan, like economy, environment protection, polycentric development, cultural heritage, demography, etc., there are no clear commitment and/or orientation towards new e-based priorities and services provisions for life and work in Serbia in future, like different public e-contents, e-services and/or e-applications development and implementation.

Thus, the aim of this article is to analyse in comparative manner Plan against Digital Agenda 2020, and to identify and propose spatial planning, i.e. national spatial plan, role in making preconditions for smart

growth by better internet access for both businesses and citizens in Serbia. Also, performed analysis includes identification of possibilities for increasing e-services offer and demand, and thus provides preconditions for universal services and universal internet access by broadband to be support in coming revision of this Plan.

## 5 METHODOLOGY

In order for Plan's provisions to be evaluated and justifiable and argued proposals for its revision and modernisation to be identified and formulated, Digital Agenda 2020 together with related documents, namely Europe 2020 strategy, Cohesion Policy 2014-2020 (URL 7) and Territorial Agenda 2020, were read and analysed. Since Serbia has status and responsibilities of EU Candidate state, the aim of performed analysis included inquiry of common EU development vision and goals, particularly prescribed actions, targets and recommendations for smart development till 2020.

Since the 'smart growth' dimension is attracting increasing interests and implementation efforts of many socio-economic-environmental development stakeholders in recent years, the performed analysis and inquiry included also worldwide experiences in building inclusive digital societies. These experiences with recommendations for building 'smart economy' that changes the way we work, live and communicate today in fast, irreversible and qualitatively different way, have been reviewed within the UN's Commission on Science and Technology for Development report (URL 4).

On the other side, in order for Plan's provisions verification to be conducted and relevant 'smart growth' for economy and society proposals for Plan revision to be formulated, the Spatial Plan of the Republic Serbia 2010-2020 (URL 5) together with its preceding studies on status and perspectives of ICT-support deployment in Serbia (Milovanović Rodić, 2009; Lalović, 2009) have been read and analyse. Also, the telecommunication market status and features in Serbia for 2012 (URL 6) has been reviewed in order for the same to be assessed and support proposed changes of Plan.

The general and specific questions posed and leading here presented analysis included: What is the national spatial planning and spatial plan role in development of certain state? Can national spatial plan supports common EU vision and goals implementation, and how? What can be the role of national spatial planning and spatial plan in providing conditions for smart growth within national economy and inclusive digital society? etc.

## 6 ANALYSIS RESULTS

As already mentioned above, Serbia has received EU Candidate status and has responsibility to adjust to this Union before joining it in coming years. This means, among the other things, that relevant sectoral and other development regulations, policies and strategies, as well as practices, processes and procedures, need to be adjusted and/or adopted to common EU vision, goals, principles and standards.

Although national spatial planning domain with related policy, principles and practice, is neither regulated nor prescribed within EU in any particular way (for example, by some programme, directive or regulation), this public sector has been strongly impacted by adjustments of other related national sectors (like transport, water management, environment protection, agriculture, culture, economy, mining, etc.). This means that since national spatial planning is about coordination of different sectoral policies and strategic priorities, and national spatial plan is model for their optimal balancing in particular –longer- time period, then national spatial plan provisions of each Member or Candidate state should be affected and appropriately reflect EU common development framework. And, this should be true for every part of integrated and sustainable development planning paradigm: economy, society and environment.

However, in current national Plan of Serbia it was neither possible for elements of Europe 2020 vision and its strategic priorities to be identified, nor Digital Agenda 2020 action plan recommendations for improving access to fast and ultra-fast internet to be noted. In other words, except telecommunication sector's policy and plan to expand and improve capacity of broadband networks in Serbia till 2020, there are no other sectors' policies or plans to stimulate 'smart growth', by providing innovative services, applications, contents or other 'investing' incentives for businesses or citizens benefits. This lack is discouraging since internet promoting activities are specially expected on side of public sector, that is Government, which should stimulate the smart economy development in Serbia today by providing open access to public data registries and databases, as well as by supporting private investments and/or investing directly in ICT

technologies advantages, especially in remote and other non-commercial or low profitable areas and domains.

Also, Digital Agenda 2020 targets are not fully presented within set of territorial development indicators identified for monitoring and evaluation of Plan implementation, for its 5 general goals achievement.

Digital Agenda 2020	Spatial Plan of the Republic of Serbia	ICT-UNESCO Development Index
<b>Broadband targets:</b>	<b>Competitiveness and accessibility of regional economies:</b>	<b>Access indicators:</b>
Basic broadband for all by 2013: basic broadband coverage for 100% of EU citizens	Territorial coverage by broadband network	International Internet bandwidth Bit/s per Internet user
Fast broadband by 2020: broadband coverage at 30 Mbps or more for 100% of EU citizens	Equal accessibility to transport and other infrastructures and information:	Percentage of households with compute
Ultra-fast broadband by 2020: 50% of European households should have subscriptions above 100Mbps	Percentage of household with internet access	Percentage of households with Internet access
<b>Digital single market:</b>		<b>Use indicators:</b>
Promoting eCommerce: 50% of the population should be buying online by 2015		Percentage of individuals using the Internet
Cross-border eCommerce: 20% of the population should buy cross border online by 2015		Fixed (wired)-broadband subscriptions per 100 inhabitants
eCommerce for business: 33% of SMEs should conduct online purchases/sales by 2015		Active mobile-broadband subscriptions per 100 inhabitants
Single market for telecoms services: the difference between roaming and national tariffs should approach zero by 2015		
<b>Digital inclusion:</b>		
Increase regular internet use from 60% to 75% by 2015 and from 41% to 60% for disadvantaged people		
Halve the proportion of population that has never used the internet by 2015		
<b>Public services:</b>		
eGovernment by 2015: 50% of citizens using eGovernment, with more than half of them returning filled in forms		
Cross-border public services: by 2015 online availability of all the key cross border public services contained in the list to be agreed by Member States by 2011		
<b>Research &amp; innovation:</b>		
ICT R&D increase: Double public investment to €11 billion		
<b>Low Carbon Economy:</b>		
Promotion of low energy lighting: By 2020 at least 20% overall reduction in energy use on lighting		

Table 1: Comparative view of internet and broadband access-related references: Digital Agenda 2020 targets, Spatial Plan of the Republic of Serbia and ITU-UNESCO indicators (URL 2, URL 5, URL 9)

Although Plan's enactment year (i.e. 2010) could be used as argument for lack of elements of these strategic EU documents, there is no reason for lack of strong ICT enabling role features elaboration and support in both preceding studies (Milovanović Rodić, 2009; Lalović, 2009) as well as Plan itself, since other relevant paradigm and initiatives have been promoted and implemented within EU in longer period (like e-Government, Information Society, ESPON, INSPIRE, etc.). However, recommendations of the Territorial Agenda 2020 on territorial connectivity and cohesive development could be somewhat recognised within Plan development concept and provisions.

And, although other related sectors –including spatial development domain- didn't prioritized for coming decade ICT support building as their areas of responsibilities, part of Plan related to development of public electronic communication networks has recognised importance of providing universal broadband access and universal service in Serbia, as preconditions for inclusive digital and cohesive territorial development within Serbia, both on country and within country levels (region, county, municipality).

Finally, noted lack of mutual sectoral activities and priorities coordination and synergy between telecommunication and other sectors, and actually failure to recognise modern life and work needs on side of spatial development sectors, is one of the main reasons why multidisciplinary dimension of Plan stayed unclear.

All identified disadvantages of Plan for building 'smart' economy and society in Serbia in this chapter, could be used as platform for revision and improvement of this strategic document in future. Some of the findings have been outlined in next chapter.

## 7 IMPLICATIONS AND PROPOSAL FOR FUTURE

In Digital Agenda 2020 (URL 2) and UN report (URL 4), it is claimed that today development of high-speed networks for internet access has revolutionary impact on number of sectors, like economic development (namely, GDP), education, health care, social and cultural enrichment as well as political engagement. This irreversible and qualitatively differentiation of services and products that build and constitute our life and work today emerge and are provided by fast and ultra-fast internet networks and accessed by various applications and contents for mobile and other internet devices. While the number of advantages and benefits from internet access is growing, supporting progress of every business and inclusion to every citizen, the important question is how developing countries, like Serbia, could keep pace with the developed world by spatial plan and planning in general.

Although the huge e-development leap is hard to be expected in short-term, in sense of development and usage of Internet access, services, contents and applications in Serbia, especially in public sector, elements and principles of Digital Agenda 2020 could be initiated and move forward with appropriate revision of Plan.

However, first broad consensus among sectoral policy and decision-makers should be reached on importance and focus on 'e-'development in future. (URL 8) This consensus should be reflected and highlighted in Plan as common awareness and directions towards new socio-economic paradigm in Serbia, namely Information society. This new 'e-' territorial development direction should be clear, for example, from Plan's vision statement, stated spatial development principles, proposed conceptual model of development, as well as indicated development scenarios; but, on the first place, within sectoral policies and plans as well.

Although new spatial planning paradigm in Serbia, particularly reflected in national plan preparation approach (Živković, 2012, 2013), has included early involvement and continuous responsibility of all development and planning stakeholders, it is important for cross-sectoral planning and development areas and approaches to be identified, motivated and supported. This means that different sectors common interests and fields of cooperation, as well as resulting strategic development priorities and projects, should be also supported clearly and separately by appropriate financial instruments and set of responsibilities, in order for those projects to be implemented and cross-sectoral synergies to be further stimulated.

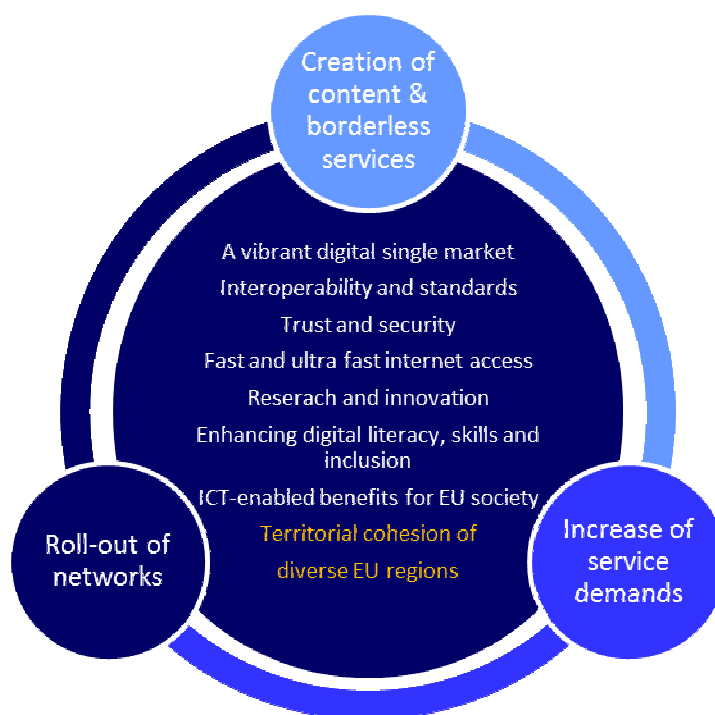


Figure 1: Digital Agenda 2020 virtuous cycle of the digital economy with 7 action areas extended with Territorial Agenda 2020 territorial development and capacities discrepancies between European regions action (URL 2, URL 3)

Since national spatial plan, like one analysed here, is implementing though its provisions elaboration and translation into lower level plans, like regional, municipal and urban ones, it is of strategic importance that Information society features are introduced on this very level, in order for described vicious cycle of digital economy to be start in systematic and structured way.

However, although it's not topic of this article, it should be noted that in implementation of new ICT supports and EU policies, it should be avoided technology deterministic approach.

## 8 CONCLUSION

Since national spatial plan presents blueprint for every country strategic development in longer run, through combining and planning in balanced and sustainable way different sectoral policies' principles and plans implementation, there is a high capacity and potential of this document and spatial planning in general to route new socio-economic development model.

This means that Digital Agenda 2020 -and other EU strategic documents and Information Society in general- priorities and targets could be supported in Serbia by their integration in national Plan, both within spatial development policy and other sectoral policies and plans. For this aim to take effect there should be first national consensus reached on broadband access importance and its optimal deployment model in Serbia, while national Plan for Serbia content and priorities should be adapted during next revision.

The main limitation of article and performed analysis refer to lack of insights into other national spatial plans (for example, for some EU Member state), and their practices and experiences in Digital Agenda 2020 priorities and actions integration mode and implementation.

In future, it should be analysed modes of Digital Agenda and information Society in general features and actions influence on spatial planning and development domain, as well as universal service and universal broadband access integration and implementation within different spatial planning documents. Also, cross-sectoral collaboration models and interests should be analysed and best practices and lessons learn from developed countries in EU applied in Serbia.

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